

Idaho Technology Pilot Project Grant Application Assurance Sheet

Project Title: **1:1 Device Deployment with
"Key Implementation Factors"**

Amount of Request: **\$138,718.74**

District Name: West Side #202

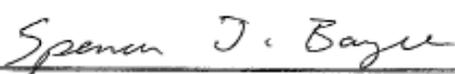
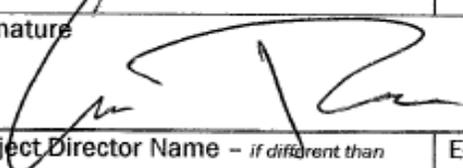
District Number: 202

School Name: Beutler Middle School

School Number: _____

Project Duration: July 1, 2013- June 30, 2014

By signing below, I certify that we have submitted an Internet Acceptable Use Policy to the State Department of Education, and have attached to the submitted documents as reference. I also certify that we have submitted a Technology Plan that meets the minimum requirements, and have attached to the submitted documents as reference.

Superintendent Name (print) Spencer Barzee	E-mail sbarzee@wssd.k12.id.us	Telephone 208 339 0845
Signature 		
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Signature 		
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Signature 		

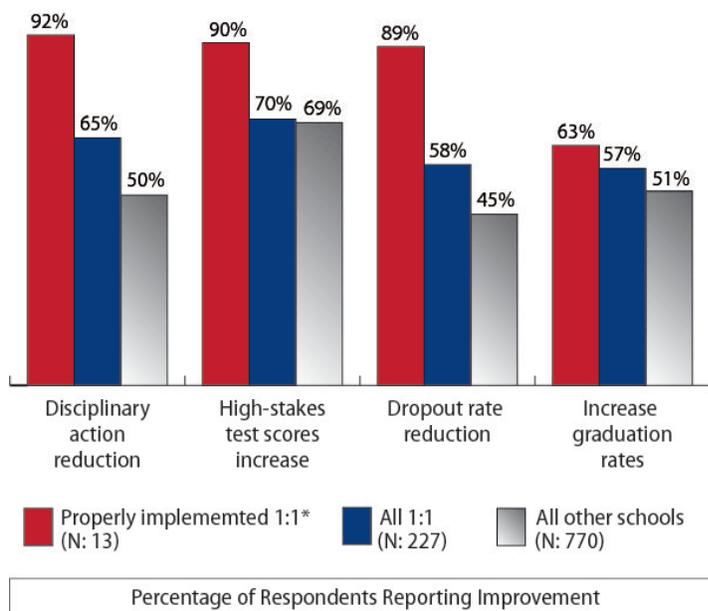
Abstract

Our district has been preparing for 1:1 deployment for several years through: the development strong technological administrators, building substantial infrastructure/connectivity, focusing on Common Core, and in-depth, ongoing professional development. Our vision for Beutler Middle School (BMS) includes energetic, learner-centered classrooms. Teaching is fluid and accommodates individual needs and equalizes instruction for *all* students. Ongoing comprehensive data is collected and analyzed to drive student learning. Teachers are highly skilled in Common Core, learning strategies, and the use of technology to support learning.

Description of Project **Need for project:** Our district has a robust dual enrollment program and Digital Learning Academy. *All* of our students are expected to take college and/or digital coursework while in high school. BMS must prepare students with higher order thinking skills and the ability to use technology as a tool for learning. As a high poverty school, students lack technological learning opportunities outside of school. Assessment data, teacher surveys, and student surveys identify a clear need for teacher training, updated curriculum, increased student motivation, and the ability for students to apply learning congruent with the Common Core testing methods. **Need for funds:** We lack adequate access to mobile devices for our students to be ready for college and digital learning in high school. We have a solid technology infrastructure and 21st Century classrooms largely in place; grant funds will be used for minor storage and connectivity upgrades, 1:1 mobile device purchase, and training. **School Improvement:** Although we have never had School Improvement issues, this project is a comprehensive, whole-school undertaking. Strong leadership will guide teachers through embedded, weekly, professional development. Teachers will use myriad data sources to coach students and create rich opportunities for learning and problem solving. **Student Academic Achievement:** All BMS students will learn in Next Generation Classrooms with instruction designed around teaching the Common Core using Higher Order Thinking Processes of *Blooms Taxonomy*. Students will be aided by technology to move from remembering and understanding information to the application and analysis of their knowledge, to result in being able to evaluate their own learning and create ideas and projects to advance their learning. Teachers, students and parents will view, analyze, and track achievement data through a comprehensive school student management program. **Accomplishments:** 1. Strong, technologically literate administrators will guide this process. 2. Blooms Taxonomy will be used as a framework to guide students in using technology to design and evaluate their own learning. 3. Teachers and students will be role models of “Digital Citizenship.” 4. Parental involvement improves as technology becomes more available. 5. All necessary connectivity, storage and devices for full grant implementation will be available. **Extension of our Vision:** As a small school system we mirror many Idaho districts and are a microcosm of larger schools. We play a visible role in Idaho as a progressive district. We excel in academics and are the frontrunner for dual enrollment. Our superintendent/middle school principal served on the state 1:1 Initiative Committee. We have successfully petitioned state policy makers to improve technology access for Idaho schools (IEN). We are confident and excited to add successful 1:1 implementation to our resume and to share our success.

Educational Need and Goals Narrative

Academic Need-We clearly understand that the acquisition of technology does not, of itself, lead to improved student achievement. According to America’s Digital Schools (2008), only 33% of schools with 1:1 device deployment attributed gains in student achievement to the implementation of technology. In 2010, Project RED conducted the first large-scale national study to identify and prioritize the factors that make some U.S. K-12 technology implementations perform dramatically better than others. RED findings clearly demonstrate that when technology is properly implemented, using ***Key Implementation Factors***, positive changes in achievement and behavior can be expected (see below). R.E.D. Finding 3: 1:1 schools employing key implementation factors outperform all schools and all other 1:1 schools.



Key Implementation Factors (prioritized)

1. **Intervention classes:** Technology is integrated into every intervention class period.
2. **Change management leadership by principal:** Leaders provide time for teacher professional learning and collaboration at least monthly.
3. **Online collaboration:** Students use technology daily for online collaboration (games/simulations and social media).
4. **Core subjects:** Technology is integrated into core curriculum weekly or more frequently.
5. **Online formative assessments:** Assessments are done at least weekly.
6. **Student-computer ratio:** Lower ratios improve outcomes.

Critical Need: The academic “bar” for our students has been set very high. West Side High School has a robust dual enrollment program and Digital Learning Academy. We fully scholarship ALL dual credits our students are able to take while at West Side High School. As such, we fully expect *all* students to participate in advanced and/or digital coursework while in high school. To be successful in high school and post graduation pursuits, it is imperative for our middle school students to use higher order thinking to learn and apply Common Core skills.

A thorough analysis was conducted on our middle school end of course assessments. A clear distinction was made in the level of growth students made on pre and post tests between

classes where technology is integrated and used as a tool for instruction and those where technology is used infrequently. The average growth for classes with limited technology use was 31 points, while average growth for courses regularly integrating technology is 48 points. Likewise, the percentage of students passing end of course tests in classes using limited technology averages 76%. Courses with more technology integration have an end of course assessment passing rate averaging 83%.

In preparation for this grant proposal, end of year teacher and student surveys were given to determine perceived successes and areas of needed improvement at BMS. Without exception, teachers asked for more digital access and for professional development to become familiar with relevant electronic educational resources. Students just wanted more access to any technology they could get- laptops, iPods, iPads, tablets, apps, etc.! We will correlate all project activities with **Key Implementation Factors** to ensure that teachers know how to use 1:1 for improved instruction, student academic and behavioral improvement.

Recent **ISAT** data, disaggregated into male/female subgroup categories, indicate a need for improved Language Usage skills, especially for our male students in grades 6, 7, and 8th. In 6th grade, a full 27% of male students scored basic or below, while only 7.4% of 6th grade females did. In 7th grade 16% of males scored basic or below in Language Usage compared to 0% of females. The trend replicates in 8th grade with 15% of males scoring basic or below in Language Usage compared to 9% of females. Surprisingly, in 7th grade science, the trend reverses. 12% of girls scored basic or below while 4% of boys scored basic. This mirrors national trends where male students are reluctant in language/social skill areas and females struggle to meet male success in math and science. In all three grades and in all three subjects, Economically Disadvantaged (54% of students) students score substantially lower than their counterparts. These students have limited access to technological resources in the home that could extend their learning beyond the classroom. In all, 17 students in BMS receive special intervention in English, Math or both.

Behavioral issues are a significant distraction to learning for six of our students. Additionally, eight students have significant attendance issues that disrupt the learning process.

Areas of Academic and Social Focus as determined through Data Analysis:

1. Implementation of all *Key Factors* for successful 1:1
2. Effective technology integration in *all* classes; daily integration for remediation.
3. *Equal access* to all subject content for all students, including sub populations (male/female, low income)
4. *Daily use* of technology for all remediation (need identified by data analysis)
5. 100% of students will participate in *advanced or digital* coursework in high school
6. Ongoing *professional development* (already scheduled weekly 60 minutes of embedded time) for effective 1:1 deployment

Scope and Sequence

For a full in-depth detail of Goals, Objectives, Activities, Timelines, Evaluations, and Data to be collected, see Appendix A

Goals: With the purchase of iPads, necessary storage, and charging equipment and substantial professional development, BMS will be the 1:1 device leader in the state of Idaho. Our BMS principal and superintendent served as a Principal Leader on the Idaho 1:1 State Committee and will be the implementation leader. All staff will be fully trained on 1:1 implementation and the use of devices for instruction, assessment and data collection. Security and connectivity will be high-quality and available at all times. Students, staff, and parents will be models of Digital Citizenship through IKeepSafe certification. 1:1 devices will be used daily to ensure that *all* students are proficient in Common Core Subjects. All BMS students will be prepared to participate in digital coursework and dual enrollment in high school. 1:1 implementation will lead to fewer incidents of negative student behavior.

Objectives will focus on Project RED *Nine Key Implementation Factors* (listed on pg 2) and the use of Blooms Taxonomy to create high-yield instruction and assessments. Teachers will use technology as a tool to improve teaching. BMS supports networking/infrastructure to ensure that devices are performing at high capacity. All constituents will participate in IKeepSafe curriculum; district firewalls will ensure safe use of devices. To ensure high yield practices, multiple forms of curriculum and data programs will be used regularly to identify needs. Students are active in their education, negative behavior declines and achievement increases.

Most **Activities** will take place during our *weekly* 60 minutes of professional development time at no cost to this project. This time will focus on technology literacy, i.e.: ISEE, School Net, Power School, Discovery Education, Data creation/collection and analysis, specific apps, iPad deployment, creating a rubric for effective application selection, and continuous assessment with instant feedback. Teachers will work together as department teams and whole school faculty to collaborate, remediate issues, and share successes. This professional development is *paramount* in the effective use of technology for the ultimate goal of student achievement. The remainder of activities will take place in the classroom as teachers and students interface with technology.

Team Member Responsibilities: In addition to consulting on grant development, the principal will be the 1:1 integration leader. He will work with the newly selected “1:1 Integration Specialist”, and technology coordinator for a seamless 1:1 deployment. This leadership team will meet upon grant award notification and be responsible for laying out the plan for professional development for 2013-14. This plan will be fluid and adjust to the needs of 1:1 deployment. Leadership team is responsible for collecting large scale data to report to the state department. BMS will host guests that visit our school to learn of our success.

Additionally, leadership team members will work state-wide to petition political entities to support technology integration and improve funding to support 1:1 deployment for all districts.

Accountability : District leaders will be accountable to the State Department of Education for the successful implementation and sustaining of grant goals. Data will be reported on a timely

basis as directed. Integration Specialist will be accountable to principal for effective deployment of devices and year-long weekly in-service success. Data to be collected will include formal and informal student assessment, teacher participation, teacher evaluations, and surveys as needed. Teachers will be accountable to administration and integration specialist for device use, adherence to **9 Key Implementation Factors** from Project RED (identified on page2), designing instruction around Blooms Taxonomy, student achievement, and student behavior. Students will be accountable to teachers to actively participate in learning using technology to improve learning, creating individual goals/designing projects to accomplish goals, and appropriate behavior. **Timeline: (more specific timeline available in Appendix A)**

- June, 2013- Grant Award Notification
- July 1- Leadership team meeting to finalize plans for equipment purchase, deployment logistics, fine-tune 1:1 policy with school board members, schedule IKeepSafe training, and create a framework for weekly 60 minute inservice meetings
- July/August 2013-Technology coordinator and 1:1 Integration Specialist will order and procure all equipment, and upgrade infrastructure to support deployment. Leadership team meets 2x/month to plan and prepare professional development.
- August 22-23- All BMS faculty members meet for full day Pre-Service 1:1 work. They will receive their devices, learn how to use them, store them, charge them, keep them safe, and review district 1:1 policy.
- August 27- Students receive initial 1:1 training/ IKeepSafe. Continual throughout year.
- September- parent digital citizenship training

More Specific Data Collection detail and timeline for collection is located in Appendix A

Scalability across Idaho: We are in an excellent place to be a model for 1:1 implementation. Our administration is accustomed to working with policy makers and we welcome visitors to observe and learn from our experience. We have robust infrastructure and are ready for device deployment. As a small system, we can learn and grow from our mistakes on a small scale and take reasonable steps to improve our plan. We have talented and teachable personnel. We are especially fortunate to have a Tech Coordinator with Masters' Degree in Information Technology Security with his thesis in the deployment of iPads K-8. He has also written policy regarding handling the devices, maintenance, cost of ownership, effective apps. We have the depth to make this project far-reaching. **Obstacles-** As a system new to 1:1 we will encounter roadblocks to our success; this provides opportunities for learning. Our Technology team will help hesitant teachers to overcome fears and grasp a new way of teaching. **Local Funds-** Many district dollars have already been invested in building capacity (leadership, infrastructure, equipment). The biggest cost savings for our proposal is 60 minutes weekly of professional development provided by the district. Gear Up and 21CCLC grant programs also marry well with our proposal and will share software, hardware, and training that can be used in our 1:1 deployment.

Sustainability /Scalability: We believe that *Success Brings Success!*

1. Our Superintendent/BMS principal served on the State's 1:1 Device committee. BMS leadership is heavily invested in technology. As stated in our Technology Plan, we have been building infrastructure toward 1:1 deployment for the past several years.
2. As a small school, we will learn with a more reasonable scale model for 1:1 implementation. BMS leaders and teachers are accustomed to sharing best practices on a local and state level. We will continue to petition technology policy makers and state political representatives to pursue the cause of technology in our state. Projected Cost over time detail is located in **Appendix C.**
3. West Side has a robust internal network with a fiber optic gigabit speed backbone and complete internal wireless N network availability. Our wireless infrastructure is centralized and modular which provides for instant growth and expansion on demand. Network services are handled by Windows Server 2008 Active Directory.
4. Our tech coordinator completed a Master's Degree in Technology Security and Assurances with his Thesis specifically relating to 1:1 iPad deployment in K-8.
5. All rooms meet 21st century standards with projector, Smartboard, laptop, document camera.
6. Technology team leaders will receive an iPad and small stipend for their time. In year 2 and beyond, we will employ cost-free technology peer tutoring, peer modeling and shadowing. West side will "share" our leadership and expertise regionally and state-wide. District tech funds will be used to replace equipment as needed. District will continue to fund weekly professional development. We will seek all additional opportunities to fund technology.
7. Gunnison Elementary in Utah has implemented 1:1; they have offered guidance to avoid costly mistakes. We have partnered with IKeepSafe for safety support.
8. Continuing after more than 8 years, our district provides 60 minutes each week for professional development and collaboration; this is a *substantial* savings for time and personnel. As much as possible, all professional development will occur on contract time.
9. One-third of BMS devices are already mobile devices of some kind. We have robust internet filtering, monitoring, and disciplinary policy. We will consider insurance for devices and also consider a \$50 repair deductible. With 1:1 training in Key Implementation Factors, we will ensure that our technology is used most effectively for student achievement. Ipad will be assigned to classrooms to be disbursed and returned daily. Checkout is permitted.
10. Our district is a standout in the state of Idaho for Dual enrollment. Last year, our juniors and seniors earned 800 college credits, paid for with an endowment of nearly \$2 million. We have high expectations for our students to participate in digital learning and dual credit.
11. West Side District is aggressive in seeking funding for technology and professional development. Our Gear Up grant supports professional development and technology. Our After School Program will partner with our 1:1 deployment for use of software/apps. Because of our success, we have garnered trust and financial support from outside sources including patrons, alumni and local businesses. We have a reputation for *frugal* use of funds.
12. All new textbook adoptions will be digital, creating substantial savings in curriculum.

Budget Narrative

BMS has thoughtfully prepared requested budget items with low-cost implementation, sustainability, and quality of goods and services in mind. This project is deep with in-kind funding to support ongoing 1:1 deployment, professional development, and statewide sharing of success.

In-Kind: BMS already has robust connectivity and security. Teachers have participated in Statewide iPad loaning programs and are familiar with iPad technology and apps. Each week, teachers are contracted to 60 minutes of professional development time that will be devoted to 1:1 deployment during 2013-14 and ongoing as needed. 2 pre-service days before school starts in the fall are devoted to 1:1 deployment. 21CCLC, Gear-up, and Qwest grant goals mesh with 1:1 deployment and will support one another. District technology funds and textbook funds will be used to maintain 1:1 and the purchase of digital textbooks and apps

Equipment: We will purchase 192 iPad 2s (16gig with wifi) at \$379 each. Each student, faculty member and administrator will have 1:1 access to these devices in each classroom throughout the day. Devices will be kept in classroom Storage/Charging Stations. After 1:1 deployment, teachers and leadership team will discuss the possibility of students taking devices home on a check-out basis. Students will be allowed use during after school program hours. We will also purchase 18- locking storage/charging cabinets (3 per classroom) at \$599.99 each. Each cabinet stores 10 devices.

Connectivity: we will purchase 9 Mac Mini Servers. One for each classroom(8) and 1 for our media center. These allow students to connect to our network via their personal login and then save their work to the network. Each will cost \$599.

Software/Apps: Basic Applications (Pages, Keynote, and Iswifter) will be included with the basic cost of the iPad and installed on each device. Pages will be used for word processing, Keynote is similar to PowerPoint, but more robust, and Iswifter allows for Adobe Flash Player. Additional software will be purchased per subject classroom and will be at the discretion of subject teams. 26 devices per room will be budgeted \$15 each for subject specific applications and curriculum.

Stipends: 1:1 Integration Specialist will be given a onetime \$5,000 2013-14 school year stipend for planning, reporting data, professional development, teaching, and bi-monthly administrative meeting/planning. Technology Coordinator will also be given a onetime \$5,000 stipend to cover extra time incurred for purchasing devices, set up, repair/warranty work and initial maintenance, upgrading, and troubleshooting, and teaching professional development

Professional Development: All teacher professional development will be provided through district contracts and paid for by West Side District. Technology Coordinator and 1:1 integration specialist will receive \$5,000 stipend for 2013-14 school year to plan, research, prepare, and teach weekly professional development. IKeepSafe student, parent, and community certification events to be held in September 2013.

1:1 Device Deployment Budget- Beutler Middle School

Date of Purchase	Alignment to Goal# (See Appendix A)	Category	Qty.	Item/Description	Item cost breakdown	Total
July 2013	#1, #2	Equipment	203	IPad 2; 16 gig, wifi only. Set of 28 per 6 classrooms with 10 each in art and band room. 15 faculty use devices. Each device comes with Pages, Keynote and Iswifter installed.	203 total units at \$404 per unit	\$82,012.00
July 2013	#1, #2	Equipment	203	Wireless Bluetooth Logitech case, keyboard, and screen protector	\$94.98 each x 192 units	\$19,280.94
July 2013	#1, #2	Equipment	20	10 unit locking storage and charging cabinets. 3 per classroom x 6 rooms to accommodate 26 Ipad in each room, 1 in Art room and 1 in Band room (8 total classrooms) to accommodate 10 units each	20 units at \$599.99 each	\$11,999.80
July 2013		Equipment	9	Whiteboard projection System for each classroom plus library (9) / Kanex VGA Adaptor (\$30 ea) and Apple TV (\$100) wireless transmitter to allow mirroring of all iPads to a projection screen.	\$130 x 9 rooms	\$1,170.00
July 2013	#1, #2	Connectivity	9	Access Points- one per classroom(8) plus one for library for a total of 9.	\$100 each x 9	\$900.00
July 2013	#1, #2	Connectivity	9	Mac Mini Server- one per classroom(8) plus one for library for a total of 9. To be used to connect to our network via personal login and save work to network.	\$599 each x 9	\$5,391.00
Begin Jul 2013- Jun2014	#1, #3, #4, #5, #6, #7	Professional Development/ Stipend	1	1:1 Integration Specialist to plan for and lead weekly professional development, admin correlation meeting, attend various training, submit data/reports (avg 6 extra hours per week 2013-14 school year for 35 weeks)	Avg 6 hrs per week 13-14 school year	\$5,460.00
Begin Jul2013- 6/14	#1, #2, #3, #4, #5, #6, #7	Professional Develop/ Stipend	1	Tech Coordinator time to procure devices, upgrade infrastructure, device and server set up, warranty work, repair/reset devices, data management, etc.(average 6 extra hours per week 2013-14 school year for 35 weeks)	Avg 6 hrs per wk x 35 wks x \$26/hour	\$5,460.00
Sept 2013- Jun 2014	#1, #2, #4, #5, #7	Software	203	Each Subject level classroom will have \$15/device for subject specific apps and curriculum. Curriculum teams will develop rubrics for admin approved app purchase	203 devices x \$15/device	\$3,045.00
9/2013	All goals	Prof. Dev.		<i>IKeepSafe</i> Training package (student, faculty and community events)	\$4,000/pkg	\$4,000.00
Ongoing	#1, #2, #3,	Inkind	n/a	Includes Professional development for 15 teachers x 1hr/week x 30weeks x \$26/hr=\$ 11,700 plus 2 full days preservice training(2x\$200/day x 15teachers)= \$6,000, connectivity already in place, infrastructure, 21 st Century Classrooms already in place.	n/a	(\$0)
				TOTAL BUDGET 1:1		\$138,718.74

Beutler Middle School

1:1 Device Deployment

Grant

Appendices

- A) **Project Scope and Sequence:** This is a detailed Spreadsheet showing alignment to Project RED Key Implementation Factors, Goals, Objectives, Activities, Timelines, Evaluation, and Data to be collected
- B) **Project RED Key Implementation Factors**
- C) **1:1 Implementation Cost Over time.**
- D) **Security Concerns:** iPad Deployment in K-8 Classrooms Abstract from our Technology Coordinator's Master's Thesis addressing security issues that are inherent to 1:1 deployment with Ipads.
- E) **Beutler Middle School Mobile Device Security Policy**
- F) **Beutler Middle School Device Security Statement of Applicability**
- G) **I Keep Safe Summary of Services**

Appendix A

Scope and Sequence Overview

- Alignment to Key Implementation Factors
- Goals
- Objectives
- Activities
- Timeline
- Evaluation
- Data

Project Scope and Sequence

*All **Key Implementation Factors** from page 2 are outlined in column 1 as they correlate with goals and objectives.

*Key factor	Goals	Objectives	Activities	Timeline	Evaluation / Data
#2 #4 #9	(1)BMS will be a 1:1 device leader in the state of Idaho	<ul style="list-style-type: none"> BMS technology team will guide faculty and students to full grant implementation BMS faculty implements Key Implementation Factors Teachers use Higher Order Processes (Blooms Taxonomy) as framework for instruction All BMS classes will use technology to enhance learning each day 	<ol style="list-style-type: none"> BMS Technology Team selected; will meet bi-monthly 1:1 Deployment Plan Produced Admin and Faculty receive on-going 60 minutes/week professional development on Key Implementation Factors, Blooms Taxonomy, Device Usage, Appropriate Software Selection. Administrator uses Key Implementation Factors and Student Achievement for formal and informal teacher evaluations Advertise success on website, newsletters, local and regional newspapers Data Reporting 	<ol style="list-style-type: none"> July 2013 July 2013 Ongoing weekly 60 minutes embedded professional development 2x/year Ongoing As directed 	Professional Development Attendance, Teacher evaluations, Administrator Evaluations, State Reporting process
#6	(2)All students and faculty in Beutler Middle School have a personal computing device	<ul style="list-style-type: none"> Teachers and students will be familiar with device hard and soft functions Teachers and students will have continuous high speed connectivity 	<ol style="list-style-type: none"> Purchase items in grant budget Set up devices, install software Upgrade connectivity in BMS 1:1 inauguration teacher training 1:1 inauguration student training 	<ol style="list-style-type: none"> July 2013 July 2012 July 2013 Aug 2013 Aug 2013 	Tech coordinator reporting at 2x/month admin mtg., Internet down-time log, teacher training attendance,
#8	(3)All teachers, students and families are models of Digital Citizenship	<ul style="list-style-type: none"> Teachers will complete Digital Citizenship Certification Students will complete Digital Citizenship Certification Families will participate in Digital Citizenship seminars 	<ol style="list-style-type: none"> IKeepSafe training for students IKeepSafe training for teachers/support staff IKeepSafe training for families. 	<ol style="list-style-type: none"> Sept 2013 Sept 2013 Sept 2013 (ongoing as needed) 	Training attendance Logs, IKeepSafe surveys, Incidental teacher Reporting
#1 #4 #5 #7	(4)All students are proficient in Common Core subjects	<ul style="list-style-type: none"> Discrepancies between ISAT subgroup achievement will be minimized All middle school students will have equal access Intervention groups will use technology daily 	<ol style="list-style-type: none"> Teacher/counselor weekly collaboration to review data and plan for technology embedded instruction and assessment Teacher bi-monthly technology integration training Teacher bi-monthly Blooms Taxonomy training Teacher/student goal setting Faculty/subject teams plan intervention for individual students Data reporting 	<ol style="list-style-type: none"> weekly as data is avail 2x/month 2x/month Quarterly Weekly Ongoing 	ISAT,ISEE tracking, End of Course Assessment, Formal unit assessment, informal assessment, level of student engagement

*Key factor	Goals	Objectives	Activities	Timeline	Evaluation / Data
#2 #4	(5)All students are prepared for rigorous high school curriculum including digital and dual enrollment courses	<ul style="list-style-type: none"> Teachers will use formal and informal assessment data to individualize instruction Teachers will use the foundation of Blooms Taxonomy as a framework for 1:1 use Students will actively participate in the learning process and be accountable for their own achievement 	<ol style="list-style-type: none"> Faculty, teacher, counselor, and department teams disaggregate formal and informal assessment data/ plan for improvement Students review data to create Common Core goals Students and parents meet with HS counselor to make 4 year plan High School/College course fair for all 8th grade students Students involved in digital coursework model during middle school. 	<ol style="list-style-type: none"> As data is available Quarterly 	Dual enrollment %, digital course %, enrollment, ISAT, ISEE tracking, EOCA, college Attendance, scholarship tracking, high school report card/GPA
#1 #3 #4	(6)BMS will have a reduction in negative student behavior	<ul style="list-style-type: none"> Students will be engaged during class time Students will use technology appropriately during free time activities 	<ol style="list-style-type: none"> Teachers provide daily technology interactive lessons and extension activities Students select own learning opportunities Teacher/students conference to address specific needs Teachers require weekly parent digital communication via web pages, blogs, Student mgmt system. 	<ol style="list-style-type: none"> Daily Quarterly Quarterly Weekly 	Spec ed reports, Behavior logs, ISEE Report, Juvenile serv reports, Electronic log-in Tracker
#2 #4 #9	(7)All middle school classes will effectively use technology to improve student achievement	<ul style="list-style-type: none"> Administrators will be technology leader in building BMS Technology Team provide peer instruction Peer modeling and sharing will focus on Key Implementation Factors Teachers will receive on-going training on effective 1:1 implementation 	<ol style="list-style-type: none"> Superintendent/Principal guides 1:1 implementation (professional development, policy, student achievement, teacher evaluation, Statewide promotion) Weekly 60 min inservice Each teacher peer modeling lesson plans 	<ol style="list-style-type: none"> Ongoing Weekly Quarterly 	

Appendix B

Key Implementation Factors

Key Implementation Factors

(Rank Order of Predictive Strength)

In 2010, Project RED conducted the first large-scale national study to identify and prioritize the factors that make some U.S. K-12 technology implementations perform dramatically better than others.

1. **Intervention classes:** Technology is integrated into every intervention class period.
2. **Change management leadership by principal:** Leaders provide time for teacher professional learning and collaboration at least monthly.
3. **Online collaboration:** Students use technology daily for online collaboration (games/simulations and social media).
4. **Core subjects:** Technology is integrated into core curriculum weekly or more frequently.
5. **Online formative assessments:** Assessments are done at least weekly.
6. **Student-computer ratio:** Lower ratios improve outcomes.
7. **Virtual field trips:** With more frequent use, virtual trips are more powerful. The best schools do these at least monthly.
8. **Search engines:** Students use daily.
9. **Principal training:** Principals are trained in teacher buy-in, best practices, and technology-transformed learning.

Appendix C

1:1 Implementation Cost Over Time

1:1 Deployment Cost per Student per Year Estimates (based on Project Red and West Side calculations)

Description	Cost per Student Per Year based on Project RED findings	West Side #202 Cost Per Student Per year <i>Estimate</i>
Hardware	\$255	\$100
Servers, routers, Firewall, and Related Software	\$25	\$7
Annualized Software Costs	\$128	\$60
Wireless Network	\$22	\$7
Tech Support	\$75	\$50
Professional Development	\$63	\$50
Total 1:1 Costs	\$568 per student per year	\$274

Appendix D

Security Concerns

Security Concerns: iPad Deployment in K-8 Classrooms

Cole Tarbet (West Side IT Director)

A Prospectus Presented to the Information Technology College Faculty
of Western Governors University
in Partial Fulfillment of the Requirements for the Degree
Master of Science in Information Technology Security and Assurance

May 20, 2013

1:1 Deployment with Ipad Devices in k-8 Classrooms Abstract

Mobile computing devices are taking public education by storm. Their adoption in the primary education classroom provides many benefits to student achievement. Rich interactive digital content streams provide students with dynamic learning experience. Automated assessment systems provide instantaneous feedback to teachers, allowing them to provide customized instruction and freeing them from some of the busywork in classroom management. Timely technology experience gives students the digital skills they need to leverage technology in their educational, career and personal goals. This project will analyze the physical risks created by providing expensive and fragile tablet devices to young children, the risks to student achievement caused by digital distraction, and the information security risks inherent to Internet access and digital information exchange. Students in a classroom are essentially employees in a company; they represent the most naïve and undisciplined group of employees imaginable, while at the same time, developing as the most precious product human society produces. Few organizational environments contain so many information security concerns which they are wholly underprepared to address. The aim of this project is to develop and apply security controls that will address the risks to students (employees), networks, information systems, and business (educational) processes specifically created by adoption of Apple iPad tablet computing devices in the classroom. This project will lean heavily on company-provided Enterprise Deployment Documentation to produce a complete ISMS process within the scope of these particular devices in a single school building housing Kindergarten through 8th grade classrooms (K-8).

Appendix E

Mobile Device Security Policy

West Side School District

Mobile Device Security Policy

ACKNOWLEDGEMENTS

K. Faisal Javed - ISO2K7 Toolkit - High level overall ISMS policy

http://www.iso27001security.com/ISO27k_Model_policy_on_information_security_overall.pdf

Noticebored.com – ISO2K7Toolkit – Model policy on portable computing security

http://www.iso27001security.com/ISO27k_Model_policy_on_portable_computing_security.pdf

Richard Regalado – ISO2K7Toolkit – Statement of Applicability (SoA) Template

http://www.iso27001security.com/ISO27k_SOA_template.xltx

OBJECTIVE

This policy's goals are to:

1. Protect information assets against internal, external, deliberate or accidental threats.
2. Protect students and teachers from the consequences of security compromises.
3. Protect hardware from damage or loss associated with compromised controls.

POLICY

- This policy is specifically intended to apply to mobile devices used in the organization.
- This policy will protect the confidentiality, integrity, and availability of information.
- Legislative and regulatory requirements will be met.
 - FERPA
 - CIPA

- Business continuity will be ensured.
- Security training will be provided to users.
- All observed security breaches or suspicious user or device behavior will be reported.
- The Technology Coordinator is the assigned Information Security Manager for the organization.

DETAIL

1. Portable information assets must be:
 - a. Physically protected against loss, theft, damage and unauthorized access - they must not be left unattended in public areas, unlocked offices, vehicles, hotel rooms, homes etc. without being physically secured e.g. using an approved security cable lock, safe or at the very least tucked away out of sight; and
 - b. Logically protected against malware, unauthorized access, and unauthorized configuration changes etc. using security products approved for this purpose by Information Security Management.
2. Sensitive personal or proprietary data stored on portable information devices and media must be encrypted using suitable products and procedures approved by Information Security Management.
3. Corporate IT equipment, including portable devices and media, must only be used by authorized users for legitimate business purposes.
4. Unauthorized software must not be loaded onto corporate IT equipment, including portable devices and media.
5. Teachers, staff, and students must not interfere with or disable security controls on corporate IT devices, including portable devices and media.

6. Before corporate information assets, including portable devices and media, are disposed of or allocated to other users, residual information must be physically destroyed or securely erased using procedures approved for this purpose by Information Security Management.
7. Employees must report security incidents and near misses, including those involving portable information assets, through the IT Help/Service Desk in the normal way.

RESPONSIBILITIES

1. Information Security Management is responsible for maintaining this policy and advising generally on information security controls. Working in conjunction with other district functions, it is also responsible for running educational activities to raise awareness and understanding of the obligations identified in this policy. It is further responsible for advising, checking and authorizing security software, configurations, and network connections etc. involving portable information assets.
2. IT Department is responsible for managing the technical infrastructure, including the operation, management, support and maintenance of most of the technical information security controls relating to portable computing devices and media.
3. IT Help/Service Desk is responsible for the incident reporting and management processes, for example allocating support calls to appropriate resolving agencies.
4. IT Support is responsible to adjust app load outs and configuration settings on demand according to teacher request within the confines of this policy and associated controls.
5. All relevant employees are responsible for complying with this and other corporate policies at all times.
6. Internal Audit is authorized to assess compliance with this and other corporate policies at any time.

CONTROLS

Controls are detailed in the associated Statement of Applicability document. Controls exist in 9 primary sections:

1. Security Policy
2. Organization of Information Security
3. Asset Management
4. Physical and Environmental Security
5. Communications and Operations Management
6. Access Control
7. Information Security Incident Management
8. Business Continuity Management
9. Compliance

GUIDANCE

Mobile devices are initially deployed using Apple Configurator software and USB connection to the Macintosh OSX deployment workstation. They are configured to be managed by Mobile Device Management software (currently Meraki MDM). Using this management software, IT support can:

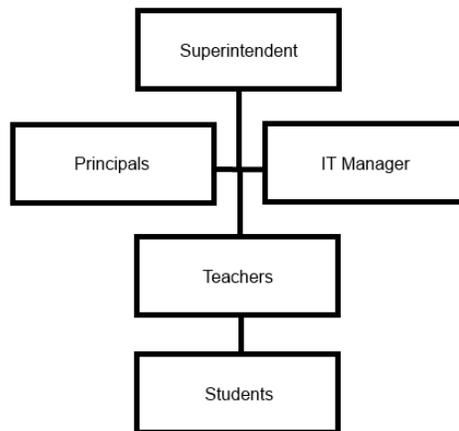
1. Update app load outs (add / remove apps)
2. Change configuration settings (enable / disable features such as camera and GPS)
3. Remotely locate, lock, and wipe devices

IT support will be responsible to use these functions on demand to support reasonable educational goals within the policy and controls defined in this document.

ROLES

Change requests should follow the organizational chart.

- Superintendent (CEO)
- IT Manager (CIO, CTO)
- Principals (Building Administrators)
- Teachers (Supervisors, Users)
- Students (Users)



STATEMENT

1. Building administrators (principals) are directly responsible for implementing the policy and ensuring teacher compliance.
2. Compliance with this policy is mandatory.

Signature _____ **Date** _____

Title _____

Appendix F

Device Security Statement of Applicability

Beutler Middle School Device Security Statement of Applicability

ISO 27001:2005 Controls			Remarks (Overview of implementation)
Clause	Sec	Control Objective/Control	
1. Security Policy	1.1	Information Security Policy	
	1.1.1	Information Security Policy Document	Available on company intranet; updated May 2013
2. Organization of Information security	2.1	Internal Organization	
	2.1.1	Management Commitment to information security	Security policy statement signed May 2013; Part of Security Policy Document
	2.1.3	Allocation of information security Responsibilities	Ownership and oversight assigned to IT manager; User responsibility defined in ISP
	2.1.6	Contact with authorities	Contact flow defined in ISP
3. Asset Management	3.1	Responsibility for Assets	
	3.1.1	Inventory of assets	See ISP
	3.1.2	Ownership of Assets	District; IT Manager; Teacher; Student
	3.1.3	Acceptable use of assets	Detailed in ISP and restricted by technical controls
4. Physical and Environmental Security	4.1	Secure Areas	
	4.1.1	Physical security Perimeter	Exterior door locks
	4.1.2	Physical entry controls	Room locks
	4.1.3	Securing offices, rooms and facilities	See ISP
	4.2	Equipment security	
	4.2.1	Equipment sitting and protection	See ISP; Technical controls - timeout values
	4.2.6	Secure disposal or reuse of equipment	Devices wiped before transfer
4.2.7	Removal of Property	Allowed for teachers; not allowed for students	
5. Communications and Operations	5.1	Operational Procedures and responsibilities	
	5.1.1	Documented operating Procedures	See deployment guide
	5.1.2	Change Management	

Management

5.2	Third Party Service Delivery Management	
5.2.1	Service Delivery	Meraki MDM
5.2.2	Monitoring and review of third party services	Cannot control
5.2.3	Manage changes to the third party services	Version notes review
5.4	Protection against Malicious and Mobile Code	
5.4.1	Controls against malicious code	App installation disabled; Management locked to single server
5.4.2	Controls against Mobile code	Internet filter; no downloads
5.6	Network Security Management	
5.6.1	Network controls	Wireless network settings managed;
5.6.2	Security of Network services	WPA2
5.9	Electronic Commerce Services	
5.9.1	Electronic Commerce	Not allowed
5.9.2	On-Line transactions	Internet filter; no shopping sites
5.10	Monitoring	
5.10.1	Audit logging	Internet filter
5.10.2	Monitoring system use	Internet filter

6. Access control

6.1	Business Requirement for Access Control	
6.1.1	Access control Policy	Active Directory users; ACL; Internet filter;
6.2	User Access Management	
6.2.1	User Registration	Secretary to student management system;
6.2.2	Privilege Measurement	IT Staff; Teacher; Student; Young Student
6.2.3	User password management	Active Directory
6.2.4	Review of user access rights	Periodic; Hire; Termination; Role Change
6.3	User Responsibilities	
6.3.1	Password Use	Sharing prohibited;
6.3.2	Unattended user equipment	Login timeouts; Workstation lock training
6.3.3	Clear Desk and Clear Screen Policy	No password post-it notes
6.4	Network Access control	
6.4.1	Policy on use of network services	Formal policy signed by all users
6.5	Operating System Access Control	
6.5.1	Secure Log-on procedures	
6.5.2	User identification and authentication	Active Directory
6.5.3	Password Management system	
6.5.5	Session Time-out	Appropriately configured for each system by data owner

	6.5.6	Limitation of connection time	
7. Information Security Incident Management	7.1	Reporting Information Security Events and Weaknesses	
	7.1.1	Reporting Information security events	Firewall and webfilter logs; IDS
	7.1.2	Reporting security weaknesses	IT capstone students
	7.2	Management of Information Security Incidents and Improvements	
	7.2.1	Responsibilities and Procedures	IT Manager
	7.2.3	Collection of evidence	
8. Business Continuity Management	8.1	Information Security Aspects of Business Continuity Management	
	8.1.2	Business continuity and Risk Assessment	IT Manager
	8.1.3	developing and implementing continuity plans including information security	IT Manager
9. Compliance	9.1	Compliance with Legal Requirements	
	9.1.1	Identification of applicable legislations	School Board; Superintendent; IT Manager
	9.1.2	Intellectual Property Rights (IPR)	IT Manager; Users
	9.1.4	Data Protection and privacy of personal information	FERPA; Secretaries; Principals; IT Manager

Appendix G

IKeepSafe Summary of Services



Who is iKeepSafe?

The Internet Keep Safe Coalition (iKeepSafe), established in 2005, is a 501(c)3 nonprofit international alliance of more than 100 policy leaders, educators, law enforcement members, technology experts, public health experts and advocates.

Through this network of support, iKeepSafe tracks global trends and issues surrounding digitally connected products and their affect on children. This research drives the continuous creation of positive resources for parents, educators and policymakers who teach youths how to use new media devices and platforms in safe and healthy ways.

How does iKeepSafe help organizations and government agencies?

Gathering recommendations from a wide range of experts, iKeepSafe offers the following support:

- The nonprofit consults with organizations, industry leaders and international government leaders to develop and distribute K-12 educational materials within their own markets. This content can be customized and co-branded for distribution by public and private schools, school districts, corporations and governments.
- iKeepSafe assists countries worldwide in implementing digital citizenship and safety strategies by informing their departments of public health, ministries of communication and law enforcement agencies in these initiatives.

How does iKeepSafe reach out to the community—and the world?

iKeepSafe has created a collection of products and tools used to affect a global society of digital citizens:

- **iKeepSafe Generation Safe™**—the only product that helps K-12 schools comprehensively navigate through their digital environments through professional development, self assessment and incident response tools.
- **MobileSafe™**—a virtual world experience that teaches children, eight- to eleven-years-old, how to identify healthy and responsible mobile phone use (includes professional development for educators and training for parents).
- **Faux Paw the Techno Cat®**—a series of educational books and animated DVDs dealing with topics like online safety, cyberbullying, responsible downloading, and balancing screen time with real life.
- **Digital Citizenship C3Matrix™**—a tool designed to assist K-12 educators in integrating the concepts of cybersafety, security and ethics into existing technology literacy standards and curricula.
- **Project PRO**—a partnership between the American School Counselor Association (ASCA), AT&T and iKeepSafe that has created an interactive program promoting the importance of security and online reputation to students nationwide.

Who has partnered with iKeepSafe?

An advocacy program has the best chance of succeeding when it is supported by an alliance of organizations working toward a common goal. For that reason, iKeepSafe has over 100 partners dedicated to leading today's youth toward achieving full digital citizenship. Some of these partners include: Adobe, American Medical Association Alliance, AOL, AT&T, Cable in the Classroom, Center on Media and Child Health (Harvard University), Cisco, CVS, Dell, Google, HP, InfraGard, Intel, Microsoft, National Association of Broadcasters, NewsCorp (Fox), Oracle, Symantec, Target, the US Department of Justice, Webroot and Yahoo.

For more information, please visit: www.iKeepSafe.org.

Appendix H

Beutler Middle School

Top Teacher Requested Apps

Beutler Middle School

Top Teacher Requested Apps

Socrative Clicker- This turns every ipad device (or iphone, ipad mini etc) into a clicker, allowing teachers to create and see live results on test questions, take instant in-class polls and have instant feedback to student understanding. Best yet, it's free and solves the decision on clickers.

Educreations- This app basically turns each ipad into an audio-recordable, interactive whiteboard. You can use it to create a recorded video tutorial similar to what you would do on a smart board or use it simply to have students instantly display their answers to a question. You could also use it to have students create a presentation walking you through the steps of a math problem.

GoodReader- This is an interactive PDF reader that allows teachers and students to use many different methods of highlighting, annotating and commenting. This tool would be perfect to allow students to dissect informational text, Common Core test questions and ACT readings.

Keynote- This is Apple's version of PowerPoint. It is basically PPT on steroids. Has better graphics, animations and allows you to do a voiceover recording. It is also very inexpensive at \$9.99 per 5 units. This is also a great tool for a teacher to create an outline for a ppt they want students to create and have the students go back and creatively fill in the information. (this has been a particularly useful tool for elementary kids who are already mastering creating a PPT project using this app.

Kidblog- This is a free online resource designed for k-12 educators who want to create a safe and simple way for their students to interact, discuss and create through a classroom blog. Teachers set up the blog for their class and have complete control over logins. This allows the teacher to create e-portfolios of their work and writing and teaches students how to become good digital citizens and thinkers.

Quizlet- This is a free app that lets teachers create digital flash cards and tests or provides teachers with access to over 21 million flash card sets to find content already created by subject. It has a few fun variations to help students memorize their notecards. It works offline and has English and Spanish audio for IEP accommodations.